

Teachers' Competency Requirement for Implementation of Inclusive Education in Nigeria

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Abstract This study examined the influence of TVET teachers' competency required for effective implementation of inclusive education in Adamawa State, Nigeria. Five teachers' competence variables—methodological competence, motivational competence, material utilization competence, instructional process competence and teaching evaluation competence were studied. A case study was used in five secondary schools involving 20 technical and vocational education and training teachers. A period of six month was used for data collection in North East Nigeria. The study employed observation, interviews and document analysis as methods of data collection. The observation method was conducted three times in the classrooms. Two sets of interview questions were set up and used in four different sessions. The findings of the study showed that TVET teachers' motivational competence, methodological competence and evaluation competence had a high influence on the implementation of inclusive education curriculum. Based on the results, the research proposes recruiting more competent TVET teachers, adopting efficient teacher material utilization techniques and instructional process competence for TVET teachers to promote efficient application of inclusive education curriculum. In addition, further study is suggested in other parts of the country on a wider geographical area or a replication of this studies.

Keywords Technical and Vocational Education and Training (TVET), Special Need Education, Learning Disabilities, Methodological Competence, Classroom Management Competence, Teaching Evaluation Competence, Motivational Competence, Instructional Process Competence

1. Introduction

Teaching disabled students in inclusive schools can be

very hard for technical and vocational education and training (TVET) teachers as both disabled and non-disabled students learn together in the same school. TVET teachers require skills and competence to serve the disabled learners in an inclusive environment. Competencies included professional understanding, teaching methods, motivational, material utilization, evaluation, adaptive training and support system [1]. TVET teachers must fulfill a capacity to plan, regulate and promote communication in the classroom for effective school integration. Providing teachers with inclusive knowledge, abilities and comprehension is essential to enable them to play an efficient part in school [2]. The inclusive education program will have a beneficial effect on the community understanding of education for students with disabilities with more preparing and skilled teachers [3]. Successful inclusive education program relies on the competency of teachers to work in the classroom with disabled students. The teacher should have a fresh paradigm in teaching abilities in terms of inclusive education in school, an ability to acknowledge the private and social importance of students with disabilities and take responsibility for the quality of the learning process. TVET teacher should have the competence to teach strategy, techniques and teaching technique in order to create willingness to work in inclusive environment with students with disabilities [4]. Teachers can better assist learning processes for students with disabilities by changing their teaching styles. But learners do not receive classroom management training in many teacher preparation programs, and there is little proof to demonstrate classroom conduct leadership [5].

TVET teachers needed more competencies and skills in understanding learners with disabilities, particularly the attitude and conduct that strongly affect the learning to successfully implement the inclusive program in schools. TVET teachers also needed a range of skills to develop their competencies, such as preparation and organizing materials for daily classes, practicing procedure to handle

student conduct, and creating a teaching atmosphere that promotes learners to participate actively in group or individual learning activities [6; 7; 8]. In order to ensure that TVET teachers are ready for inclusive education, opportunities should be provided to get along with learners with unique requirements (Ismail, Hassan, Bakar, Hussin, Hanafiah & [9]; Chinonso Okolie, Nwonu Elom, Uchechukwu Osuji, & Agu Igwe, 2019 [10]), learn about inclusive education strategies and policies (Armstrong, Armstrong, & Spandagou, [11]), and receive assistance for inclusive classroom education [12]. On the other side, in order to accomplish the teaching process in the inclusive classroom, teachers need to think about the significant skills and competencies to be prepared for them.

Statement of the Problem

Special Need Education (SNE) students have the right to quality and appropriate education with a peer without disabilities depending on their interests, needs and skills. Inclusive teacher must be trained in particular fields linked to the teaching method of the SEN student. Future teacher students' formal education process is aimed at developing those skills that guarantee achievement and precious outcomes. Current academic and classroom practice needs teachers who are prepared to teach under such challenging circumstances generated by students with disabilities' particular features. It is sensible to think that a skilled TVET teacher can and will make his or her students feel successful and satisfied. Thompson [13], commented that the integration method was more social than scholarly, with favorable attitudes being accepted and developed as the primary objectives. By legislative means, however, the Nigerian government commits schools and teachers directly to develop individual curricula for SNE students.

2. Literature Review

The most important skills that TVET teachers should acquire were skills in managing the environment of teaching and learning, understanding student behavior and developing skills in social interaction. TVET teachers should be prepared for work with students with disabilities rather than theoretical knowledge with practical knowledge or application of skills [14]. Many factors including qualification, special education training, teaching experience, and perceptions of inclusion importance affect the preparedness of TVET teachers in teaching students with disabilities. Inclusive learning has effectively altered the understanding of inclusive systems by educators and provided a solid foundation of the skills to be applied in future teaching, according to Specht, McGhie-Richmond, Loreman, Mirenda, Bennett, Gallagher and Lyons [15]. A key factor in the success of

inclusive education is the ability of teachers to work both practically and theoretically with students with disabilities. Inclusive strategies are insufficient to improve positive attitudes, teaching efficiency, or reduce anxiety without associating it with a broader inclusive education context [16]. The TVET teacher should have a strong conceptual thinking in terms of inclusive education, the ability to recognize the meaningful learning activities for disabled students and take responsibility for the quality of the learning process.

In the inclusive education schools, the common practice is to educate students with disabilities along with the typical student who has no such disabilities. According to Sharma, Jitoko, Macanawai and Forlin [17], inclusive is a place where students with special needs are learning in the same setting together with mainstream students. Thus inclusive education goes beyond a child's physical presence in the classroom situation; it goes through the same curriculum as the non-disabled, appears with them at the same examination and acquires the same certificate (Srivastava [18]). Spreading inclusive education ideas has made the need to study such as the teacher's willingness and ability to work in inclusive education a reality. Providing teachers with inclusive knowledge, skills and understanding (Sharma, Simi & Forlin, [2]), is important so that they can be more skilled in school. Nevertheless, preparation for inclusive education by the TVET teacher is extremely challenging for the training institute of teachers.

Institution must provide an appropriate curriculum for inclusion such as content-pedagogical curriculum, moral training-based curriculum, or independent and creative training that is suitable for use with specific educational needs, whether for children with physical and intellectual disabilities, or multidisabled children [20]. Teachers' competence should therefore considered as a key factor for successful implementation of inclusive education. As Jones and Symeonidou [21], have mentioned, inclusive education policies should be consistent with teachers' competent teaching practices. Teachers' skills in inclusive education are determined by the role of the teacher in the inclusion of disabled students in the inclusive educational environment. Bukvić [22] study showed that many educators did not support students with special needs to develop positive attitudes to inclusive learning. Among the reason is many teachers including TVET teachers have very little or limited knowledge of teaching special needs students, and their attitudes are mostly negative in supporting inclusive education. As Alquraini and Rao [23], concluded, it takes more than workshops alone to equip teachers to be effective in inclusive settings. In addition, the skills of the examined teacher are not done equally in regular school.

Inclusive education also includes all types of excellent teaching methods that are unlimited. What excellent educators are doing is thinking about children carefully

and developing methods to reach all the kids. It would be hard to tackle all the particular expertise and abilities that educators need to show to effectively include learners with disabilities, but particular regions of knowledge and abilities can be identified [24]. Differentiation planning includes thinking about various aspects of project learning and can be altered to satisfy the requirements of the student. Teachers can take into account elements such as the present skills of learners, their interest and the best methods they learn. Goss et al. [25], recommend that school leaders should provide teachers with the necessary time, instruments and professional learning to monitor students' progress and incorporate targeted teaching into their practice. The teacher is adequately accountable for the adaptation of educational planning, education, evaluation, evaluation, and curriculum, etc. Any teacher dealing with various skills in periodic schools will feel that it can be a challenging and complicated issue to include these kids. The complexity engaged in teaching a range of learners with a variety of experiences, backgrounds, skills and abilities presents educators with difficulties. The need to cater for individual differences in inclusive classrooms has led to the growth of pedagogical methods aimed at ensuring that the teaching climate benefits all learners, including those with disabilities or problems [26].

Generally speaking, some teachers believe that inclusive education requires elevated levels of teaching skills and organizational changes required to promote efficient learning for disabled students. Mainstream teachers need to know the distinct kinds of special education needs kids and the practical learning techniques required to efficiently educate them in mainstream schools to accomplish this [27]. Developing teacher, school personnel understanding and abilities and providing schools with clearer guidance and support to better react to the requirements of disabled learners should be taken into account by government. Providing future inclusive learners with sound knowledge and practice linked to understanding disability within the classroom framework, differentiating training for different skills, managing student conduct successfully, and working with peers to meet student requirements can only help make educators stronger and more likely to become candidates when they join the field [24]. As Urton, Wilbert and Hennemann [28], found that school principals play a main role in developing a school culture to promote inclusive education in the general process of school integration in working with their teaching employees. Ball and Green [29], added that school leaders are the leading innovators in methods that address all students' learning requirements and align the attempts of educators with this objective.

3. Research Question

The study was guided by the one research question:

What is the level of TVET teacher's methodological competence, classroom management competence, teaching evaluation competence, motivational competence, and instructional process competence on effective implementation of inclusive education?

4. Methods

The design of this study is based on a case study. This study examines specifically on the competencies of TVET teacher in teaching inclusive schools. This study employed purposive sampling. The sample of the study is 20 TVET teachers at five schools in North East States of Nigeria. For data collection, this case study used interviews, observations and document analysis. An interview session was conducted to obtain the qualitative data. Interviews were conducted individually and focus groups with TVET teachers as participants for three times. Observation is carried out during teaching and learning activities and was conducted for three times. Instruments used in collecting data were teachers' competence checklists adopted from [30], field notes, and video recordings. The five items in the checklists used for data collection were (i) methodological competencies, (ii) instructional process competencies, (iii) material utilization, (iv) motivational competencies, and (v) teaching evaluation competencies. Documents referenced are (i) Daily Lesson Plan, (ii) Annual Teaching Plan and (ii) the assignments. This case study was analyzed and reported descriptively and supported by reference statistics. Data were analyzed descriptively and make use of observation, interview and document analysis method.

5. Results

To prepare them for inclusive education, the TVET teachers should inculcate the abilities and competencies in them. For information collection, interview, observation and field notes were performed to define the competencies of the TVET teacher. Table 1 shows the findings of all the competencies of TVET teachers considered in this study.

5.1. Research Question

What is the level of teacher's methodological competence, teaching evaluation competence, motivational competence, and instructional process competence on effective implementation of inclusive education?

The fourth category of the competencies were the skills in Material Utilization Competencies. This include ability to; (i) making use of readily available instructional materials to enhance teaching/learning, (ii) attending formal training where issues about instructional resources are taught, (iii) constructing various evaluation

instruments for inclusive education classroom setting, (iv) employing various evaluation instruments correctly for inclusive education students, (v) using evaluation data to improve my job situation in inclusive education, and (vi) keeping records of students' performance progress in inclusive education. The fifth category of the competencies was the skills in Teaching Evaluation. They include ability to; (i) constructing various evaluation

instruments for students in inclusive education, (ii) employ various evaluation techniques to teach students in inclusive education setting, (iii) assessing the behaviors of students in inclusive education class, (iv) assessing individual needs of the students, (v) setting formative evaluation during lesson presentations in inclusive education class, and (vi) trying to be fair in testing, marking, grading, as well as in examination.

Table 1. Teachers' Competencies for Inclusive Education

No	Code	Methodology
1	AADI	Ability to analyze difficulties and issues.
2	ADCG	Ability to define content and goal.
3	ACLUMV	Ability to conduct lesson using varieties of methods.
4	ADPS	Ability to devise possible solutions.
5	APISSG	Ability to plan and implement steps to reach solutions and goals.
6	ASPSNE	Ability to set priorities for special needs students.
No	Code	Motivation
1	AMURMS	Ability to make use of reward to motivate students.
2	ACCE	Ability to create conducive environment.
3	ASATM	Ability to select appropriate teaching materials.
4	AOPT	Ability to operate projected tools to motivate students.
5	AACK	Ability to apply contemporary knowledge.
6	AMUPW	Ability to make use of praising words.
No	Code	Material Utilization
1	AURAIM	Ability to use readily available instructional materials.
2	AATIR	Ability to attend training for instructional resources
3	ACVEI	Ability to construct various evaluation instruments.
4	AEVEIC	Ability to employ various evaluation instruments correctly.
5	AUEDIJ	Ability to use evaluation data to improve job situation
6	AKRSPG	Ability to keep records of students' performance/progress
No	Code	Instructional Process
1	AISR	Ability to interact with students respectfully.
2	AUAQS	Ability to use appropriate questioning skills
3	ADCCP	Ability to develop course curricula properly.
4	AEETM	Ability to ensure effective time management.
5	AUALT	Ability to use appropriate language techniques.
6	ASSMSM	Ability to show sufficient mastery of subject matter.
No	Code	Teaching Evaluation
1	ACVEI	Ability to construct various evaluation instruments.
2	AEVET	Ability to employ various evaluation techniques.
3	AASB	Ability to assess students' behaviors.
4	AAIN	Ability to assess individual needs.
5	ASFE	Ability to set formative evaluation during lesson presentations.
6	AFCE	Ability to be fair in conducting examination.

5.2. Motivational Competence

Motivational competence is one of the skills that should be acquired by the TVET teachers in terms of achieving competencies in inclusive education. The finding is showed in Table 2.

Table 2 showed the list of competencies in evaluation and monitoring for mainstream teachers to be a competent teacher in the inclusive education program. Findings clearly showed the competencies were (in rank order) AACK, AMURMS, ACCE, ASATM, and AOPT. In details, 17 participants have had the ability to make use of reward to motivate students (AMURMS). It is a compulsory for teachers to have an ability in rewarding their students in other to motivate them to learn. However, only two participants have the ability to operate projected tools to motivate students with disabilities (AOPT) was not encouraged to be acquired by TVET teachers in the inclusive program. Overall, 67.5% participants have had skills in motivation in order to be a competent inclusive education teacher. Nevertheless 32.5% were not.

Inclusive teaching and learning demands teachers to differentiate between learners with educational disabilities and learners in need of intensive instruction or differentiated instruction. This calls for competency of teachers in the processes of special education including monitoring and evaluation procedures to deliver teaching and learning that responds to the individuality of learners in inclusive classrooms.

5.3. Instructional Process Competence

TVET teachers need to be competent in instructional

process for the successful inclusion. To teach a variety of student in a classroom is quite challenging for mainstream teachers. What are the skills need to be mastered by TVET teacher in the inclusive classroom? To answer this question, a checklist of observation was used to identify the skill of TVET teachers in order to be competent in teaching student with learning disabilities in the inclusive education. Table 3 shows the result of the observation done.

Table 3 showed the findings of observation on competencies in instructional process. Skills in instructional process were (in rank order) ADCCP, AISR, AEETM, AUAQS, ASSMSM, and AUALT. Observation findings showed that 52.5 % of participants have had competencies in instructional process, whereas 47.5 % were not. 16 participants were identified have had an ability to develop course curricula properly for inclusive education students in the inclusive program. Teachers must be competent in developing curricula to encourage progress among all students. This is imperative for students. Out of the six themes of the instructional process competence, the ability to use appropriate language techniques (AUALT) and an ability to use appropriate questioning skills for student with learning disabilities (AUAQS) were prove to be the lowest instructional process competence acquired by the participants. This means that the provisions relating to the instructional practices of teachers are very evident.

From the interview session, the participant explained that, to have all the instructional process competence needed for inclusive education, they must attend a special course or workshop, focusing on special education but some of the participants said they were not offered the opportunity to attend any courses.

Table 2. Motivational Competencies

No	Code	Motivation	No of Participants	
			Yes	No
1	AMURMS	Ability to make use of reward to motivate students	17	3
2	ACCE	Ability to create conducive environment.	16	4
3	ASATM	Ability to select appropriate teaching materials.	15	5
4	AOPT	Ability to operate projected tools to motivate students	2	18
5	AACK	Ability to apply contemporary knowledge.	18	2
6	AMUPW	Ability to make use of praising words.	13	7
Total			81	39

Table 3. Instructional Process Competencies

No	Code	Instructional Process	No of Participants	
			Yes	No
1	AISR	Ability to interact with students respectfully.	13	7
2	AUAQS	Ability to use appropriate questioning skills	9	11
3	ADCCP	Ability to develop course curricula properly	16	4
4	AEETM	Ability to ensure effective time management.	10	10
5	AUALT	Ability to use appropriate language techniques	7	13
6	ASSMSM	Ability to show sufficient mastery of subject matter.	8	12
Total			63	57

5.4. Methodological Competence

TVET teachers need to be competent in their methods of teaching for the successful implementation of inclusive education. To teach a variety of student in an inclusive education classroom is quite challenging for TVET teachers. What are the skills need to be mastered by TVET teacher in the inclusive classroom? To answer this question, a checklist of observation was used to identify the skill of teachers in order to be competent in teaching student with learning disabilities in the inclusive education. Table 4 shows the result of the observation done.

Table 4 showed the findings of observation on competencies in teaching methods. Skills in teaching methods were (in rank order) ASPSNE, ACLUVM, ADPS, AADI, APISSG, and ADCG. Observation findings showed that 58.33% of participants have had competencies in teaching strategies, whereas 41.66% were not. 7 participants were identified have had an ability to define content and goal for inclusive education students. In the inclusive program, define content and goal were prepared for the student according to the normal syllabus but teacher must modify them to be suited with the student needs especially for the student with disabilities. Out of six methodological skills, the ability to communicate contents specific to a target group (APISSG) and an ability to d define content and goal of the student with disabilities (ADCG) were prove to be the lowest skill acquired by the participants. From the interview finding, participant had mentioned that they were not competent in both skills because teaching approaches and teaching strategies required specific training in special education courses.

5.5. Teaching Evaluation Competence

TVET teachers need to be competent in evaluation for the successful Implementation of inclusive education. To teach a variety of student in a classroom is quite challenging for TVET teachers. What are the evaluation skills need to be mastered by TVET teacher in the inclusive classroom? To answer this question, a checklist of observation was used to identify these skills of teachers in order to be competent in teaching student with learning disabilities in the inclusive education. Table 5 shows the result of the observation done.

Table 5 showed the list of skills in evaluation for TVET teachers to be a competent teacher in the inclusive education school settings. Findings clearly showed the skills were (in rank order) ACVEI, AFCE, AASB, AEVET, AAIN, and ASFE. In details, 16 participants have had the ability to construct various evaluation instruments for student learning skills (ACVEI). It is a compulsory for teachers to have an ability in ACVEI (construct various evaluation instruments) as a preparation to plan a strategy for teaching and learning process effectively. However, only 6 participants have the ability to set formative evaluation during lesson of student with learning disabilities (ASFE) was not encourage to be acquired by TVET teachers in the inclusive schools. Overall, 58.33% participants have had a skill in evaluation and in order to be a competent inclusive teacher. Nevertheless 41.66% were not. From the interview session, the participants explained that to have the skill they must attend a special course or workshop, focusing on special education but most of the participants said they were not offered to attend any courses.

Table 4. Methodological Competencies

No	Code	Motivation	No of Participants	
			Yes	No
1	AADI	Ability to analyze difficulties and issues.	11	9
2	ADCG	Ability to define content and goal	7	13
3	ACLUVM	Ability to conduct lesson using varieties of methods.	14	6
4	ADPS	Ability to devise possible solutions.	12	8
5	APISSG	Ability to communicate contents specific to a target group	9	11
6	ASPSNE	Ability to set priorities for special needs students.	17	3
Total			70	50

Table 5. Teaching Evaluation Competencies

No	Code	Evaluation	No of Participants	
			Yes	No
1	ACVEI	Ability to construct various evaluation instruments.	16	4
2	AEVET	Ability to employ various evaluation techniques.	11	9
3	AASB	Ability to assess students' behaviors.	13	7
4	AAIN	Ability to assess individual needs.	9	11
5	ASFE	Ability to set formative evaluation during lesson	6	14
6	AFCE	Ability to be fair in conducting examination.	15	5
Total			70	50

Table 6. Material Utilization Competencies

No	Code	Motivation	No of Participants	
			Yes	No
1	AURIM	Ability to make use of readily available instructional materials	3	17
2	AFT	Ability to attend formal training on issues relate with instructional resources	8	12
3	ACEI	Ability to construct various evaluation instruments	9	11
4	AEEIC	Ability to employ various evaluation instruments correctly	5	15
5	AUED	Ability to use evaluation data to improve my job situation	4	16
6	AKR	Ability to keep records of students' performance/progress	13	7
Total			42	78

5.6. Material Utilization Competence

TVET teachers need to be competent in the utilization teaching materials for the successful inclusion. To teach a variety of student in a classroom is quite challenging for TVET teachers. What are the skills need to be mastered by TVET teacher to handle the materials in the inclusive classroom? To answer this question, a checklist of observation was used to identify the skill of TVET teachers in order to be competent in teaching student with learning disabilities in the inclusive education. Table 6 shows the result of the observation done.

Table 6 showed the list of competencies in material utilization for TVET teachers to be a competent teacher in the inclusive education program. Findings clearly showed the competencies were (in rank order) AURIM, AUED, AEEIC, AFT, ACEI and AAKR. In details, 17 participants have had the Ability to make use of readily available instructional materials to enhance teaching/learning (AURIM). It is a compulsory for TVET teachers to have an ability to use the readily available materials for effective teaching because this will often be enough to warrant their being part of every classroom's basic equipment. However, only 4 participants have the ability to use evaluation data to improve my job situation (AUED) was not encourage to be acquired by TVET teachers in the inclusive program. Overall, 35% participants have had the expected skills in motivation in order to be a competent inclusive teacher. Nevertheless 65% were not. The respondents clarified from the interview session that they had to join a unique course or workshop to have the skills, concentrating on special education, but most respondents said they were not allowed to join any classes.

6. Discussion

The teacher's competency includes all the skills required by a teacher in the inclusive education to convey units of knowledge, application and attitude to the student. In order to successfully integrate inclusive education, it is essential to enhance teacher quality in relation to the skills needed in teaching methods, students' motivation, instructional process, material utilization and teaching

evaluation. Learner motivation is one of the most critical issues in inclusive education. In TVET, we need to create a sense of what learners need to understand—more often than in inclusive learning. Motivation is the first step towards learning effectively. Researchers recognized the teaching elements that enhance learners' self-motivation. In order to encourage students to become confident, self-motivated learners, teachers and training staff can provide early, positive feedback on a regular basis to strengthen the confidence of students that they can achieve their goals well. Through giving tasks that are either too easy or too difficult, they also provide opportunities for student success.

In training TVET teachers to be skilled in teaching inclusive education, evaluation skills are essential. It mean TVET teachers must be able to develop alternative tests, evaluate student development, assess the level of functioning of each student, assess the individual needs of the student, solve problems, assess all kinds of previous student skills and decide the position of parents. Evaluation is one of the most important skills in adapting inclusive education programs to a regular school teacher [31]. The teacher should employ both basic skills such as gathering, studying and context information from learners with different skills as well as highly specialized skills such as structured collection, management, evaluation, and analysis. Teachers must be able to develop an evaluation history and use cognitive learning strategies [32]. In addition, TVET teachers need to develop the skills necessary to work efficiently with parents and other professionals, such as counselors, clinicians, social workers and professional teachers, to promote productive and comprehensive special education.

Competency in teaching methods were also necessary for effective inclusive education practice. The skills required in teaching strategies were the ability to change student activities, plan classroom operations for all students, use a variety of teaching methods effectively, adjust classroom equipment, adapt instructional content to the student's needs in the classroom, and provide the best learning strategy. It is clear that educators must know how to improve teaching and learning, and innovate in teaching, and they must be exposed to different methods of teaching [33]. Adapting teaching strategies including

collaborative learning and peer tutoring can facilitate student learning processes [34]. The ability to provide the finest teaching techniques with inclusive values similarly supports the way educators cope with complicated characteristics in the 21st century education framework [35]. When choosing educational duties for learners to do separately in their seats, the TVET teacher must be confident that each student has the capacity to do the job given to him or her without the need for continued attention and support from the colleagues [36]. It is very essential to adapt the curriculum and content to suit students with disabilities. The priority for students with disabilities, as argued by [37], must be that they have access to suitable curricula, not that they are integrated into a national curriculum intended for the mainstream population. A significant problem in inclusive special education is to strike the correct equilibrium for each child with special needs between an academic or developmental curriculum that focuses on the requirements of most children and a functional curriculum that addresses the particular instructional requirements of special requirements children [38].

Using educational equipment in the teaching and learning process provides the learner the chance to touch, smell or taste items. Knowledge and skills can be transferred to learners with various kinds of appropriate teaching materials. Using educational equipment becomes very important in enhancing the general quality of student-level learning experiences. Students were asked to state to what extent their educators used teaching and learning materials other than textbooks in teaching and learning TVET subjects. Although educators use various teaching equipment to motivate learning through the use of textbooks, charts, models, graphics, actual items and improvised materials [39]. The success of achieving what they are accomplished to achieve in an educational situation depends on the suitability of the instructional materials, adequacy and effective material utilization [40]. The efficacy of teaching equipment in supporting the academic achievement of learners in teaching and learning is unquestionable. It offers the sensory experiences that the learners need for an efficient and meaningful change of behavior.

For efficient academic performance of learners in classrooms, instructional materials are intended to enhance the quality of education. Students' performance on the expected learning results provides validation-loop on interaction and instruction achievement. Grosch [41], argues that teaching materials are essential TVET teaching and learning because they are used to complement a teacher's efficiency and the effectiveness of teaching. Moghavvemi, Sulaiman, Jaafar and Kasem [42], stated that educational materials promote the teaching of abstract concepts by helping to put thoughts into practice and boost the imagination of learners. In addition, teaching materials assist to boost active involvement in

the learning process while saving the energy of teachers, decreasing teacher focus in teaching. In the same vein, Brown [43], says that the use of teaching equipment makes teaching efficient as it allows learners to actively engage in learning in the classroom. All these opinions indicate that the use of teaching materials may improve the efficiency of learners. This instruction is also noted by McGrath and Powell [44]. They claim that teaching materials have direct contact with all the students' sense bodies. By stating that educational materials are very important learning and teaching instruments, Shereni [45], promotes this perspective. He adds that educators need to discover the needed and appropriate teaching materials to complement classroom interaction and textbooks to broaden and stimulate students' interest in the topic.

7. Conclusions

Inclusion of students with learning disabilities is still in progress in TVET courses in Nigeria secondary schools and institutions of higher learning. This research was performed to examine TVET teacher competence linked to teaching evaluation, teaching methods, students' motivation, instructional process and material utilization. To make inclusive education successful as a positioning for learners with different kinds of learning disabilities, TVET teachers will need to modify the inclusive education paradigm in order to satisfy the student's requirements. The TVET teachers must be well fitted with the understanding of different kinds of learning disabilities, student evaluation, motivation and an efficient teaching strategy approach. To handle the inclusive education classroom and satisfy the requirements of unique children, TVET teachers need a competency development program. Successful inclusive education also requires the TVET teachers to work with school administrators, parents and colleagues to officially and informally meet student requirements.

REFERENCES

- [1] Keppens, K., Consuegra, E., & Vanderlinde, R. (2019). Exploring student teachers' professional vision of inclusive classrooms in primary education. *International Journal of Inclusive Education*, 1-17.
- [2] Sharma, U., Simi, J., & Forlin, C. (2015). Preparedness of Pre-Service Teachers for Inclusive Education in the Solomon Islands. *Australian Journal of Teacher Education*, 40(5), n5
- [3] Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019). Learning impacts reported by students living with learning challenges/disability. *Studies in Higher Education*, 1-13.

- [4] Kim, W., Shin, H. Y., Woo, H., & Kim, J. (2019). Further Training Needs For Tvet Trainers: Lessons from a National Survey on Rwandan Tvet Trainers' instructional Competencies. *Journal of Technical Education and Training*, 11(2).
- [5] Essex, J., Alexiadou, N., & Zwodziak-Myers, P. (2019). Understanding inclusion in teacher education—a view from student teachers in England. *International Journal of Inclusive Education*, 1-18.
- [6] Rashid, M. A., Bakar, A. R., Asimiran, S., & Tieng, L. P. (2009). Career development interventions in secondary schools in the state of Terengganu, Malaysia. *European Journal of Social Sciences*, 8(1), 62-67
- [7] Misra, P. K. (2011). VET teachers in Europe: policies, practices and challenges. *Journal of vocational education & training*, 63(1), 27-45.
- [8] Ebenehi, A. S., Rashid, A. M., & Bakar, A. R. (2016). Predictors of career adaptability skill among higher education students in Nigeria. *International Journal for Research in Vocational Education and Training (IJRVET)*, 3(3), 212-229.
- [9] Ismail, A., Hassan, R., Bakar, A. A., Hussin, H., Hanafiah, M. A. M., & Asary, L. H. (2018). The development of TVET educator competencies for quality educator. *Journal of Technical Education and Training*, 10(2).
- [10] Chinonso Okolie, U., Nwonu Elom, E., Uchechukwu Osuji, C., & Agu Igwe, P. (2019). Improvement needs of Nigerian technical college teachers in teaching vocational and technical subjects. *International Journal of Training Research*, 17(1), 21-34.
- [11] Armstrong, A. C., Armstrong, D., & Spandagou, I. (2010). *Inclusive education: International policy & practice*. Sage
- [12] Loreman, T., Forlin, C., Chambers, D., Sharma, U., & Deppeler, J. (2014). Conceptualizing and measuring inclusive education. In *Measuring inclusive education* (pp. 3-17). Emerald Group Publishing Limited.
- [13] Thompson, J. D. (2017). *Organizations in action: Social science bases of administrative theory*. Routledge.
- [14] Boahin, P., & Hofman, W. A. (2014). Perceived effects of competency-based training on the acquisition of professional skills. *International Journal of Educational Development*, 36, 81-89. Specht, McGhie-Richmond, Loreman, Mirenda, Bennett, Gallagher and Lyons (2016).
- [15] Specht, J., McGhie-Richmond, D., Loreman, T., Mirenda, P., Bennett, S., Gallagher, T & Lyons, W. (2016). Teaching in inclusive classrooms: Efficacy and beliefs of Canadian preservice teachers. *International Journal of Inclusive Education*, 20(1), 1-15.
- [16] Yeo, L. S., Chong, W. H., Neihart, M. F., & Huan, V. S. (2016). Teachers' experience with inclusive education in Singapore. *Asia Pacific Journal of Education*, 36(sup1), 69-83.
- [17] Sharma, U., Jitoko, F., Macanawai, S. S., & Forlin, C. (2018). How Do we Measure Implementation of Inclusive Education in the Pacific Islands? A Process for Developing and Validating Disability-Inclusive Indicators. *International Journal of Disability, Development and Education*, 65(6), 614-630.
- [18] Srivastava, M., De Boer, A., & Pijl, S. J. (2015). Inclusive education in developing countries: A closer look at its implementation in the last 10 years. *Educational Review*, 67(2), 179-195.
- [19] Bunnell, T., M. Fertig, and C. James. 2017. "Establishing the Legitimacy of a School's Claim to Be "International": The Provision of an International Curriculum as the Institutional Primary Task." *Educational Review* 69 (3): 303-317. doi:10.1080/00131911.2016.1213224
- [20] Jones, C., & Symeonidou, S. (2017). The Hare and the Tortoise: a comparative review of the drive towards inclusive education policies in England and Cyprus. *International Journal of Inclusive Education*, 21(7), 775-789.
- [21] Bukvic, Z. (2014). Teacher's competency for inclusive education. *The European Journal of Social & Behavioural Sciences*, 11(4), 1585.
- [22] Alquraini, T. A. S., & Rao, S. M. (2018). A study examining the extent of including competencies of inclusive education in the preparation of special education teachers in Saudi universities. *International Journal of Disability, Development and Education*, 65(1), 108-122.
- [23] Allday, R. A., Neilsen-Gatti, S., & Hudson, T. M. (2013). Preparation for inclusion in teacher education pre-service curricula. *Teacher education and special education*, 36(4), 298-311
- [24] Goss, P., Hunter, J., Romanes, D. & Parsonage, H. (2015). Targeted teaching: How better use of data can improve student learning. Gattan Institute, Victoria.
- [25] Van Kraayenoord, C., Waterworth, D. & Brady, T. (2014). Responding to individual differences in inclusive classrooms in Australia. *Journal of International Special Needs Education*, 17(2), 48-59
- [26] Hornby, G. (2015). Inclusive special education: development of a new theory for the education of children with special educational needs and disabilities. *British Journal of Special Education*, 42(3), 251-256.
- [27] Urton, K., Wilbert, J. & Hennemann, T. (2014). Attitudes towards inclusion and self-efficacy of principals and teachers. *Learning Disabilities: A Contemporary Journal*, 12(2), 151-168.
- [28] Ball, K. & Green, R. L. (2014). An Investigation of the attitudes of school leaders toward the inclusion of students with disabilities in the general education. *National Forum of Applied Educational Research Journal*, 27(1&2), 57-76
- [29] Umar, M. A., Rashid, A. M., & Asimiran, S. (2019). Agriculture Teachers' Competence on Skill Acquisition among Students with Auditory Processing Disorder. *International Journal of Academic Research in Progressive Education & Development*. DOI: 10.6007/IJARPE/ 8(4), 215-229.
- [30] Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools*. Routledge
- [31] Srinivasan, M., Li, S. T. T., Meyers, F. J., Pratt, D. D., Collins, J. B., Braddock, C. & Hilty, D. M. (2011).

- “Teaching as a competency”: competencies for medical educators. *Academic Medicine*, 86(10), 1211-1220.
- [32] Pantić, N., & Florian, L. (2015). Developing teachers as agents of inclusion and social justice. *Education Inquiry*, 6(3), 273-11.
- [33] Garrote, A., Sermier Dessemontet, R., Moser Opitz, E. (2017). Facilitating the social participation of pupils with special educational needs in mainstream schools: A review of school-based interventions. *Educational Research Review*, 20(1), 12-23
- [34] Di Gennaro, D. C., Pace, E. M. & Iolanda, Z. & Aiello, Z. (2014). Teacher capacity building through critical reflective practice for the promotion of inclusive education. *Problems of Education in the 21st Century*, 60, 54-65.
- [35] Ajithkumar, M. U. (2016). Training of teachers: Institutionalizing training and development of academic faculty of TVET institutions for realizing excellence. In *India: Preparation for the World of Work* (pp. 183-210). Springer VS, Wiesbaden.
- [36] Farrell, M. (2010). *Debating Special Education*. London: Routledge.
- [37] Hornby, G. (2015). Inclusive special education: development of a new theory for the education of children with special educational needs and disabilities. *British Journal of Special Education*, 42(3), 251-256.
- [38] Elliot, A. J., Dweck, C. S., & Yeager, D. S. (Eds.). (2017). *Handbook of competence and motivation: Theory and application*. Guilford Publications
- [39] Harris, A. (2019). *Teaching and learning in the effective school*. Routledge.
- [40] Grosch, M. (2017). Developing a competency standard for TVET teacher education in ASEAN countries. *Jurnal Pendidikan Teknologi dan Kejuruan*, 23(3), 279-287
- [41] Moghavvemi, S., Sulaiman, A., Jaafar, N. I., & Kasem, N. (2018). Social media as a complementary learning tool for teaching and learning: The case of youtube. *The International Journal of Management Education*, 16(1), 37-42.
- [42] Brown, M. G. (2016). Blended instructional practice: A review of the empirical literature on instructors' adoption and use of online tools in face-to-face teaching. *The Internet and Higher Education*, 31, 1-10.
- [43] McGrath, S., & Powell, L. (2016). Skills for sustainable development: Transforming vocational education and training beyond 2015. *International Journal of Educational Development*, 50, 12-19.
- [44] Shereni, N. C. (2019). The Role of Technical and Vocational Education and Training (TVET) in Restoring Hospitality Sector Specific Skills in Zimbabwe: A Students' Perspective. *Journal of Hospitality & Tourism Education*, 1-9.